Gustaf Olsson

Biomedical Scientist & Laboratory Technician

Personal details

Adress: Parternas gränd 19, 226 58 Lund
Tel: +46 707818358
Email: gustaf.olsson92@gmail.com
LinkedIn: https://www.linkedin.com/in/gustaf-olsson-b0ab8717a

Citizenship: Swedish
Language skills: Swedish (Native tongue)
English (Fluent)
German (Spoken)

Personal skills:
- Interactive and social person that thrives in a group environment.
- Scientific communication
- Pedagogical experience from supervising both students and new employees.

Professional skills:
- Histological/cellular immunostaining and FISH
- Confocal fluorescence microscopy
- Animal handling (animal certification attached as a separate doc.)
- Stereotaxic surgery
- Microbial and cellular culturing
- Molecular analysis tools: Western Blot, ELISA, SDS-Page, PCR.
- Experience operating in Biosafety level 3 facilities

IT-skills: NIS Elements AR, ZEISS ZenBlue, IDS7 imaging, Fiji Image J, GraphPad PRISM, ImageLab, Labguru, Microsoft Office.

Additional merits:
- Awarded LEAF silver certification at UCPH for exemplary actions undertaken to improve sustainability practice in the lab.

References:

Liv Eidsmo, Professor at Translational Skin Immunology, UCPH
E-mail: liv.eidsmo@sund.ku.dk
Tel: +45 35337127

Tomas Deierborg; Professor at Experimental Neuroinflammation, LU
E-post: tomas.deierborg@med.lu.se
Tel: +46 709708212

Martina Svensson; Associate Researcher at Experimental Neuroinflammation, LU
E-post: martina.svensson@med.lu.se
Tel: +46 462220866

Professional summary

From my years within the university and the clinics, I have received opportunities to explore and experience different medical research fields such as neurobiology, microbiology and cancer pathology, and gain insights of the scientific and clinical aspects of medicine. Along the path I got to learn and master a wide variety of analytical tools, in which the field of bioimaging really caught my interest. I have been able to work with several staining methods in both cells and tissue from a great variety of different origins, including human, and to gain experience operating with a variety of bioimaging equipment and tools.

On my scientific journey I have been assisting and managing scientific projects, providing support for my team, while honing my skills as an independent researcher including how to process and present my own data. With my recent positions operating as a laboratory technician, I have gained experience in the practical and administrative role managing a laboratory environment.

I am excited to explore new fields and challenges in neuroscience and continuing my scientific career together within an engaging team.

Employment history

Movement Disorder group DRCMR, Hvidovre Hospital **Nov 2024 –**
Position: Research assistant

Investigating the roles of IT and PT neurons within the cortico-striatal pathway in a parkinsonian mouse model.
My work includes planning and executing surgical interventions in the brains of mice using a stereotaxic apparatus along with behavioral and histological analyses.
I am currently working on establishing an optogenetic setup for upcoming projects.

Translational Skin Immunology UCPH **Nov 2023 – Oct 2024**
Position: Laboratory technician

Providing administrative and practical assistance on the laboratory floor and within separate projects of the research group.
• Histological staining and confocal imaging analysis expertise.
• Administering the laboratory environment to increased efficiency and sustainability.
•Taking part in the interactive scientific discussions and presentations.

Clinical Pathology, Immunology and Neurology at Region Skåne Lund — **Oct 2019 – Oct 2023**

Position: Biomedical Analyst/ Laboratory technician

At Clinical Pathology my work took part along the steps from the operation table to final diagnosis.
• Being on call, providing crucial assistance for the pathologists when surgeons, still at the operation table, required a preliminary diagnosis.
• Responsible for providing large scale Immunohistochemistry staining procedures where we utilized a wide range of specific markers as well as more delicate procedures such as fluorescence in situ hybridization.
• Part of a specialized unit working exclusively with neuropathological cases handling delicate and hazardous cases such as potential prion diseases operating in class 3 biohazard facilities.

Education and research from Lund University

Master's degree in Biomedical Science — **Aug 2016 – June 2018**

Bachelor's degree in Biomedical Science — **Aug 2011 – June 2015**

Published scientific work within the Experimental Neuroinflammation group — **Feb 2017 - June 2019**

- *The effect of electroconvulsive therapy on neuroinflammation, behaviour and amyloid plaques in the 5xFAD mouse model of Alzheimer's disease*

Aim: To study the effects of electroconvulsive therapy on β-amyloid plaque formation in the brains of differently aged 5xFAD mice, a mouse model with high and rapid β-amyloid plaque deposition, well suited to study Alzheimer's disease (AD). Animal behaviour trials were performed to estimate AD severity, followed by histological evaluation of the amyloid plaque formation using immunofluorescence imaging.
https://doi.org/10.1038/s41598-021-83998-0

Master Thesis: Experimental Neuroinflammation group — AD — **Oct 2017 - June 2018**

- *Characterization of different populations of monocytes and microglia in Alzheimer's disease*

Aim: We were interested in the genetic profile of resident microglial cells and infiltrating monocytes from the periphery into the brain and their roles in AD pathology. Using unique markers distinguishing different cell phenotypes we could study their populations and compartmentalization in the tissue as well as identify and isolate the cells using FACS for RNA seq. analysis.

Bachelor Thesis: Dementia Research Unit — AD — **March 2015 – June 2015**

- *Study of interaction of amyloid β (1-42) with liposomes using small angle x-ray scattering*

Aim: How does beta amyloid peptides integrate into the lipid bilayer of signalling vesicles. Vesicles isolated from cultured N2A cells overexpressing APP were analysed using small angle x-ray scattering. With this tool the vesicle radius and lipid bilayer thickness could be measured and consequently how the presence of beta amyloid could potentially affect these parameters.

Division of Microbiology, Immunology and Glycobiology – Urinal Tract Infection (UTI) — **Dec 2014 – March 2015 & June 2015 – June 2016**

- *Polymorphism in the MYC promoter and its correlation with susceptibility for infection in acute pyelonephritis patients*

Aim: To study the variations within specific well-known SNPs in human UTI patients by pyrosequencing and evaluate whether any distinct sequence patterns could be correlated with UTI severity.

- *The transcriptional regulator c-MYC and its regulatory role in the inflammatory response to pyelonephritis infection*

Aim: To study how the c-MYC protein expression was altered in A498 human kidney carcinoma cells following infection with different strains of E.coli known to be involved in UTI.

Basal Ganglia Group — Parkinson's Disease (PD) **June 2014 – Sep 2014**

- *Efficacy of the mGluR5 antagonist MTEP in a mouse model of L-DOPA induced dyskinesia*

Aim: To verify the extent of dopaminergic denervation in mice receiving the neurotoxin, 6-OHDA and to study the degree of dyskinesia induced in mice treated with L-DOPA. The dopaminergic compartments were stained for tyrosine hydroxylase (TH), highly expressed in dopaminergic cells, by immunohistochemistry, as a marker for dopaminergic activity. Following lesion, some mice received MTEP to study whether this could alleviate the L-DOPA induced dyskinesia through its antagonizing effect on the mGluR5 receptor.

Translational Neurology Group — PD **Sep 2013 – April 2014**

- *The restorative effects induced by infusion of a neurotrophic factor on the dopamine system*

Aim: To investigate how the administration of a neurotrophic factor, PDGF-BB, could induce regenerative effects within the dopaminergic compartments in a partially lesioned PD mouse model. PDGF-BB would continuously be injected into the dopaminergic compartments via surgically implanted mini-osmotic pumps. By immunohistochemistry the levels of TH in the dopaminergic compartments were measured as a marker of dopaminergic activity.

Personal interests

I have a strong passion for cooking, always striving for authenticity and continuously exploring new cuisines, while learning to grow more of my own food and to forage what nature has to offer. On my free time I also play the piano and viola, ranging from classical, anime and movie music.